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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/767,397

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EXAMINER

MONDT, JOHANNES P

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/767,397	<b>Applicant(s)</b> ITO ET AL.	
	<b>Examiner</b> JOHANNES P. MONDT	<b>Art Unit</b> 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11, 13, 14 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11, 13, 14 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

Amendment filed 12/12/07 forms the basis for this Office Action. In said Amendment applicant substantially amended pending, elected claims 11, 13, 14 and 30 at least through substantial amendment of independent claim 11.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. ***Claims 11, 13, 14 and 30*** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Specifically, only “inserted” is disclosed with regard to the guide rod, hence “substantially inserted” as claimed (claim 11, line 16) constitutes a significant broadening of “inserted”. The limitation “substantially” is recognized as extremely broadening; see MPEP 2173.05(b), and, although not in itself indefinite, constitutes a significant broadening of the claim language, which, in the instant case does not appear to be supported by the Specification. Instead, “substantially” as disclosed ([0024]) is an adverb of “without varying the posture of the angle of operation 100 as a whole”. Therefore, the limitation “substantially” constitutes new matter.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 11, 13, 14 and 30** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the limitation “substantially” as an adverb of “inserted” (line 16 of claim 1) constitutes new matter, as detailed above in section 2. Therefore, its metes and bounds, - and thereby the metes and bounds of the invention are not disclosed either, rendering the claim indefinite.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 11, 13, 14 and 30** are rejected under 35 U.S.C. 102(b) as being anticipated by Paillaman et al (US 2002/0080905 A1) (previously cited).

N.B.: The rejection is offered subject to the noted indefiniteness under 35 U.S.C. 112, second paragraph.

*Paillaman et al teach* an apparatus for executing an operation inside a pressure vessel 10 (Figure 1 and [0020]) of a nuclear reactor that includes a jet pump 62 (Figure 2 and [0024]-[0025]) with an inlet mixer 70, a nozzle, 66 and a side opening 68 (‘suction inlet’) (loc.cit.) positioned between the inlet mixer and the nozzle, the apparatus comprising:

an apparatus body 130 (in the apparatus depicted in Figures 4-6; see [0032]) and a guide rod 136 ([0032]) comprising an elongated tubular member (because probe lines run through 130: [0032]) and configured to be suspended and substantially inserted into the jet pump ([0036]) during the operation;

a tool 140 ([0033]-[0034]) attached to the apparatus body *capable* of executing the operation within an interior of the jet pump in the vessel; and

a guide rod ('insertion subassembly 144 with 'positioning tube portion' 146) 144/146 ([0029]-[0031]), disposed at an end portion of the apparatus body, having an incline at a predetermined angle relative to a vertical axis of the apparatus body (N.B.: the guide rod 144/146 is inclined with respect to the vertical (defined as along the apparatus body)); and said predetermined angle necessarily is set at the angle between the vertical as defined by the (apparatus) body 130, and element 144/146 : see Figure 4, resp., and [0029]-[0032]; and hence the guide rod is configured as claimed); the inclined guide rod being configured to facilitate entry of the guide rod into a tapered, namely protruding from the vertical) surface of the side opening 68 of the jet pump (Fig. 4 and [0032]-[0034], and [0029]-[0031]) (Note: said guide rod is inserted into the jet pump through 144/146 (see [0036]) and hence said guide rod is indeed configured to facilitate entry of the guide rod into the jet pump) after which, in its intended use by Paillaman, the guide rod is inserted into the side opening, the apparatus body is lowered and substantially inserted into the jet pump to enable the tool to perform the operation.

Furthermore, the limitations (a) “for executing an operation inside a vessel of a vessel of a nuclear reactor that include.....nozzle” (lines 1-3), (b) “for executing the operation....” (lines 7-8), and (c) “wherein after the guide rod.....the operation” (lines 15-16, final two lines) are strictly limitations of intended use. Applicant is reminded that intended use and other types of functional language must result in a structural difference between the claimed invention, i.e., in the claimed apparatus itself, and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. MPEP 2114.

*On claim 13:* given the placement of the nuclear reactor vessel in normal position as witnessed by its foundation and by its steam outlet 42 (Figure 1, and [0021]), and given the orientation of the suction inlets 68 into which the guide and portion of the body of operation apparatus is inserted, a gravitational force parallel rather than anti-parallel to the direction in which said guide rod 144/146 and body portion 130 are inserted is inherent and thus is one of the forces on the guide permitted to draw the body into the interior of the pump. Furthermore, the guide rod 144/146 is freely and movably supported at the end portion of the apparatus body 130 (by location cone 148; see Figure 4, [0031] and [0036]), the guide rod is freely supported while said guide rod inherently can be moved, such as by the action of any net force, hence is movably supported; and said guide rod is inclined at a predetermined angle with respect to the

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vertical axis due to the gravitational force when in operation (Fig. 4 and discussion, [0029]-[0034]).

*On claim 14:* said guide rod is biased to return to a predetermined angle with respect to the body, because “insertion sub-assembly is sized to receive tool head 120 (hence also apparatus body 130; see [0029]) and connected flexible drive cable 112 and guide tool head 120 into jet pump through suction inlet 68”, with reference to Figure 4. Hence, upon repeated use according the prescription by Paillaman et al said bias to return to the predetermined angle necessary for insertion into the jet pump is disclosed.

*On claim 30:* an orientation of the guide rod is capable of being adaptively varied so as to correspond to an interior surface of the jet pump as the guide rod is inserted into the jet pump, because the guide rod can be inclined with respect to the vertical of the apparatus body (see [0035] and Figure 4).

### ***Response to Arguments***

7. Applicant's arguments in Remarks filed 12/12/07 with said Amendment have been fully considered but they are not persuasive. In particular,

#### On I. Rejections under 35 USC 112, 1 and 2:

Although indeed the removal of the limitation prompting said rejections has been removed, and hence the grounds for said rejections have been removed as well, the present claim language, through its recitation “substantially” in “substantially inserted” (final line of claim 11), is not fully supported by a written description, constituting new matter (see sections 2-6 above for details).

#### On II. Rejections Under 35 USC 102(b):

The substantial amendment to all claims still permits a rejection over Paillaman et al, albeit with a different set of identifications.

Applicant is alerted once again to the previously indicated problem of the functional nature of the claim limitations: among other limitations cited in the rejection to which reference is made, the limitation “an apparatus for executing an operation inside a vessel of a nuclear reactor that includes a jet pump with an inlet mixer, a nozzle, and a side opening positioned between the inlet mixer and the nozzle” only claims the apparatus with the capability to execute as claimed. It is clear from the inclination of both elements 136 and 144/146 and the disclosure by Paillaman et al of the insertion of the apparatus body through 144/146 into the jet pump through 144/146 positioned in suction inlet 68 (identified with the opening as claimed). Hence, both the capability and the actual use as intended are disclosed by Paillaman et al. Only the capability is of patentable weight, hence *a fortiori* the claims stand rejected over the prior art as cited. Applicant apparently agrees that 144 is a guide (page 9, Remarks), but does not explain why the guide cannot be the guide rod part of the apparatus as claimed; Figure 4 evidently shows said guide 144 to be inclined, while said guide needs to be inclined, because Paillaman et al specifically disclose the application of 144 to guide the body 130 into the jet pump through suction inlet 68 (the claimed opening), which evidently has an inclination with respect to the vertical, as shown through Figure 2 (showing its rim to protrude) and Figure 4 (see [0035]). The rejections above are prompted by these considerations.

### **Conclusion**



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8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES P. MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Johannes P Mondt/  
Primary Examiner, Art Unit 3663